

What is claimed is:

1. A method for operating a level control system of a motor vehicle which includes a control apparatus, a plurality of sensors for directly or indirectly determining the distances of the vehicle chassis to the axles of the vehicle wheels to obtain measured values for said distances and actuators for changing said distances, the method comprising:

checking in said control apparatus as to whether said distances exceed predetermined limit values with said checking being performed by said control apparatus on the basis of said measured values in a desired-value actual-value comparison;

actuating at least one of said actuators in response to a deviation of said distances from said limit values in order to obtain a level compensation in the sense of a horizontal alignment of said vehicle chassis; and,

preventing an automatic level compensating control when said motor vehicle is disposed in a slope and slant position impermissible for the safety of said motor vehicle.

2. The method of claim 1, comprising the further step of determining the impermissible slope and slant position from sensor data as to the speed (vehicle wheel rpm), longitudinal acceleration and transverse acceleration of said motor vehicle.

3. The method of claim 2, comprising the further step of drawing a conclusion as to the presence of the impermissible slope and slant position when the vehicle speed value is equal to or close to zero and the longitudinal acceleration value and the transverse acceleration values are greater than zero.

4. The method of claim 1, wherein said impermissible slope and slant position is defined as a position whereat said vehicle is on a slope having a slope inclination angle (α) exceeding a pregiven slope inclination limit value (α_{Limit}) and, to this slope,
5 said vehicle assumes a slant position angle (β) which exceeds a slant position limit value (β_{Limit}).

5. The method of claim 4, wherein said slope inclination limit value (α_{Limit}) and said slant position limit value (β_{Limit}) are dependent upon: the spatial dimensions of said motor vehicle, the typical loading of said motor vehicle, the weight distribution
5 and the total weight.

6. The method of claim 5, wherein, for a mid-class European motor vehicle the slope inclination limit value (α_{Limit}) is greater than 20° and the slant position limit value (β_{Limit}) is greater than 30° .

7. The method of claim 1, wherein, when said slope inclination limit value (α_{Limit}) and said slant position limit value (β_{Limit}) are exceeded, said control apparatus advises the driver of said motor vehicle of this condition and/or the values thereof
5 optically or acoustically by activating a corresponding display device and/or loudspeaker.

8. The method of claim 1, wherein said control apparatus permits a manually triggered actuation of said actuators after an ending of the automotive level control method.

9. The method of claim 8, wherein said control apparatus, with the aid of a display device or audio device, advises the driver as to which one of the affected actuators and in which manner these actuators are to be actuated in accordance with the determination of said control apparatus in order to bring the vehicle chassis into a more comfortable and/or safer spatial position notwithstanding the determined impermissible slope and slant position.
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10. The method of claim 1, wherein, for a traveling vehicle, the instantaneous driving speed is determined and the instantaneous steering angle of said vehicle is determined utilizing a steering angle sensor; and, wherein, for a drive through a curve on a slope, the influence of the transverse acceleration and the longitudinal acceleration on the vehicle as a consequence of this drive through a curve is considered in the determination of said impermissible slope and slant position as well as a level compensation thereof.
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11. The method of claim 1, wherein sensor signals measured by sensors are filtered before further processing in said control apparatus to avoid signal jumps.
12. The method of claim 1, wherein the method is carried out in a control apparatus of a passenger car, an off-road vehicle or a commercial vehicle.